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FORTY YEARS OF SOVIET MEDICINE

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/Following is the translation of an unsigned article in Le Concours Medical (The Medical Forum), Paris, January 1960, pages 189-196./

In 1957 the State Medical Publications of the USSR published a commemorative volume devoted to Soviet accomplishments in public health from 1917 to 1957. The authors of the "report" were less interested in describing scientific progress and the state of research then in showing what had been accomplished in the teaching, organization and scope of therapeutic or prophylactic medical treatment. This document, with its social approach and reliance on statistics, tables, and graphs, aimed at revealing Soviet achievements in the field of Public Health, is written without a polemical purpose, and considers the Soviet figures without inplying any comparison with other countries, favorable or unfavorable.

It has been impossible to give a "digest" of this remarable book of 700 large format pages. We have therefore chosen a few chapters of more particular interest because of their novelty or originality, and give an account of them without comments. Presented even in this manner, we think these "selected documents" will give rise to reflections.

I. Historical Record of Health Protection in the Soviet Union Some Statistical Data on its Development from 1917 to 1957

State expenditures for Public Health
1926-27: 660 million rubles
1957 : 37 billion 600 million rubles

Growth of the principal indices in various sectors of Public Health (in percentages of 1913)

Number of hospital institutions	1928	124	1956	553
Number of beds	1928	119	1956	656
Number of physicians	1932	328	1956	1423
Number of beds for confinements	1928	360	1956	1992
Number of rural medical aid centers	1932	184	1956	1559
Number of consultations for women and children.....	1928	100	1956	644
Number of places in day nurseries ..	1928	100	1956	696

Cont. Historical Record of Health Protection in the Soviet Union
Some Statistical Data on its Development from 1917 to 1957

Number and distribution of beds according to specialized services

Oncology	1940	1499	1956	17244
Gynecology	1940	30823	1956	58604
Infantile infections	1940	49682	1956	107013
Ophthalomology	1940	13015	1956	22737
Oro-rhino-laryngology	1940	6586	1956	12634
Tuberculosis	1940	30056	1956	111565
Dermato-venereology	1940	14305	1956	27610
Infectious diseases (children & adults)	1940	91471	1956	148181
Mental diseases	1940	83895	1956	115430
Nervous diseases	1940	8584	1956	18347
Maternity cases	1940	107827	1956	142911
General medicine	1940	117897	1956	57158
Miscellaneous	1940	27791	1956	30785

Medical Education

	Faculties	No. of students	No. of graduate physicians
1914	13	8600	900
	70	142900	16600

Number of inhabitants per physician
1950: 715
1955: 625 (France in 1953: 1100 inhabitants per physician)

Number of deaths per 1000 inhabitants
1913: 30.2 1956: 7.7 (USSR)
1913: 17.7 1956: 12.4 (France)

II. Principal Stages in the Development of Public Health in the USSR

First stage in Soviet health organization (1918-1920). The culminating moment was marked by the decisions and programs adopted at the Eighth Congress of the Communist Party in March 1919:

1) Sanitation improvements for inhabited localities.
2) Elaboration of food hygiene measures for the general public.
3) Elaboration and application of prophylactic measures against infectious diseases.
4) Adoption of health legislation.
5) Organization of the struggle against tuberculosis, alcoholism, etc.
6) Organization of free therapeutic and pharmaceutical medical service.

Second stage (1921-1925). This paralleled the restoration of the national economy and was marked by the creation and multiplying of State institutes for scientific research (institutes of health and sanitation,

occupational diseases, child welfare, venerology, social hygiene, etc.), and by establishment of the medical sector and the administrative division of a part of the country into health sectors.

Third stage (1926-1932). This was marked by modifications of the health organization along with national industrialization and collectivization of agriculture. These modifications included formation of the first mobile polyclinical units, systematic planning of the health system in agricultural areas and in large construction projects, intensification of health education of the people through various trade union organizations, etc. The Seventh Congress of Public Health in March 1930 brought together the representatives of research institutes, professional associations, the National Labor Commissariat, etc.

Fourth stage (1933-1941). During this period the constitution of the USSR, adopted in 1936, fixed the eight-hour workday, paid sick leave, disability and old-age pensions, and decreed the establishment of an extensive system of vacation and rest centers. The number of hospital beds increased 62% in the cities and 96% in rural areas. Medical education was reformed and extended.

The health system was oriented toward coordination of the activities of all the health organizations within a given sector. Thus the health unit of a large industry grouped into one coordinated activity the factory infirmaries, the polyclinic, the hospital, the maternity ward, pediatric consultations, etc. Health inspection centers were charged with supervising application of the rules of hygiene by all organizations, industries, establishments and city planning administrations.

World War II brought a rapid growth in the total strength of the medical establishment -- in cadres and auxiliary personnel. In industry, the disruptions in manpower, composed principally of women and adolescents, brought an intensified development of health and epidemiological organizations. The hospitals were oriented toward highly specialized activities, especially in the field of surgery and infectious diseases.

The post-war period has been marked by the unified integration of health and anti-epidemiological activities, the prolongation of medical studies, a growth in the number of beds in hospitals (20%), in sanatoriums (30%, in day nurseries (20%), in rest homes, etc. In 1955 the average number of beds per 1,000 population was 6.5. the sixth Five-Year Plan anticipates 7.8 beds per 1,000 population and one doctor for each 542 inhabitants.

III. Medical Service to the Urban Population. Therapeutic and Prophylactic Organization

First stage. This was characterized by a growth in the number of urban hospitals, in their patient capacity and in specialized services adapted to the various population groups according to age, professions, etc., without any division into sectors. There was development or establishment of services outside the hospital: dispensaries, polyclinics, consultations by specialists, home calls, industrial medical centers, etc.

From 1928 to 1940 the number of consultations outside the hospitals increased from 133,942,000 to 267,101,000.

Second stage. Division into urban sectors took place. The physician-therapist became responsible for the health organization of his sector. He was called upon to conduct consultations at the polyclinic, make home calls and organize prophylactic, anti-epidemiological health information activities in his sector, and work in close collaboration with the inspectorate of health.

Third stage. Coordination was achieved between the hospital and extra-hospital systems, assuring liaison between the dispensary and the hospital and permitting the physician to follow his patient from the beginning to the end of his illness.

In 1949 a decree of the Ministry of Public Health introduced a new classification of the therapeutico-prophylactic institutions and set the limits of the standard sector of 4,000 inhabitants. The following are recognized as therapeutic institutions of a sector: hospital functioning in liaison with a polyclinic, industrial hospital, hospital for infantile diseases with consultations and a pediatric polyclinic, maternity ward, and dispensary.

Mobile consultations are likewise given to certain specified categories of healthy persons (according to criteria of age and profession), as well as to all inhabitants of the sector requiring prophylactic observation or permanent treatment (tuberculosis, tumors, cardio-vascular diseases, etc.)

The development of patient capacity, increase in the number of medical personnel, improvement in their qualifications, in research equipment, in diagnosis and therapeutics are especially noteworthy in the fields of surgery, ophthalmology, oto-rhino-laryngology and stomatology.

Medical service to the urban population in industry has progressively changed in form. The infirmary-dispensary system has been replaced by a group of components called the medico-health section of industry. For example, the medico-health section of the Tashkent textile combine includes a hospital center of 400 beds, a polyclinic with all specialized consultation services, and ten infirmaries and laboratories for health and epidemiology. The section is attached to the Tashkent Medical Institute and functions according to the sector principle of distributing physicians by workshops and geographical areas. This distribution by workshops permits the physician to make daily observations of his patients under their working conditions. While systematically studying indications of disease, the physician assists the shop management and trade union bodies in working out measures for improving work regulations, rest, food, etc., in the interest of reducing the incidence of disease.

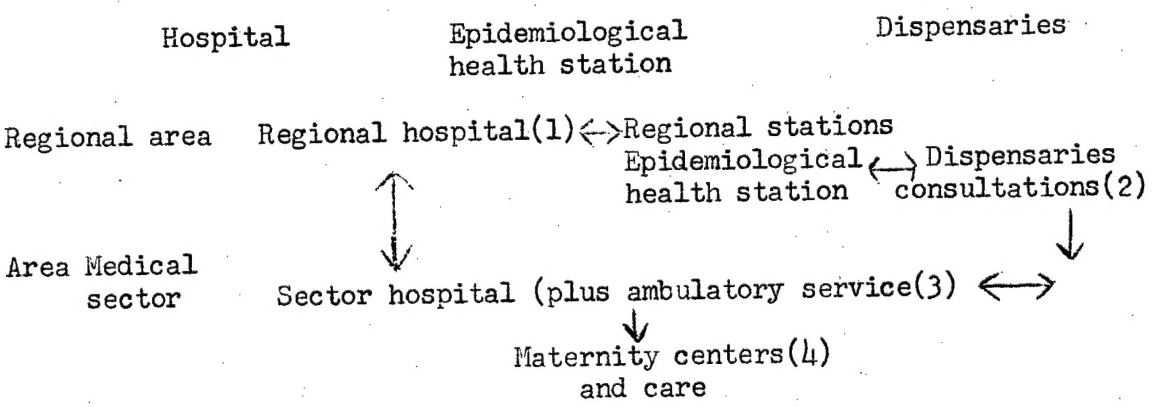
Within the general framework of medical service to the urban population, the authors also examine the development of the specialized hospital, mobile and research centers devoted to the struggle against tuberculosis, venereal and mental diseases and oncology.

IV. Medical Service to the Rural Population

The organization of health and sanitation in the rural regions of the Soviet Union has centered around three specific characteristics of rural populations: the preponderance of rural over urban dwellers (82.3% of the total population in 1927), the dispersal of inhabitants (density of five people per sq. km.), and finally the collectivization of agriculture.

A uniform system of health organization for agricultural areas was not worked out and applied until 1938. This system is based on two principles: the prophylactic orientation of the medical service, and establishment of the rural medical sector to serve a fixed area with the setting up of a center of orientation and coordination of the activities of all the health institutions in this area.

To make up for the backwardness of rural medicine as compared with that of the cities, and to make available specialized medical services to the agricultural populations, the therapeutic and prophylactic system has been organized as follows:



(1) Becomes the center of specialized treatment for a regional area.
(2) Specialized consultations (tuberculosis, venerology, oncology...)
(3) Polyclinic service (pediatrics, etc.)
(4) Maternity clinics, whether or not attached to a kolkhoz; day nurseries financed by Public Health.

To meet the difficulties imposed by the immensity of certain regions of the Soviet Union, the first health stations established by air were opened in 1927, bringing emergency service to populations far removed from hospital centers, insuring the success of anti-epidemiological campaigns and assuring specialized consultations and participation in sanitation improvement programs in these regions. In 1956 aviation had served 667,800 people.

As is shown by the increasing frequency of consultations and hospitalizations by the sector hospital, rural medicine is being oriented toward standardization of the health system available to the rural populations, with the degree of professional qualifications and specialization coming progressively into line with urban medicine.

V. Public Health -- the Woman and the Child

The basic principle of medical service to women and children is uniformity of objectives and means of assistance to the mother -- particularly to the working mother -- and to the child. A single organization, Narkomat (National Committee for Motherhood), founded in 1918, concentrates all the authority and responsibilities for the health protection of mothers and infants. Since 1925 it has been establishing "Institutes for the Protection of Motherhood and Infancy" in the principal cities of the Soviet Union.

A system of maternity centers and specialized gynecological and pediatric consultations is developing. More and more day nurseries and kindergartens are opening. In 1956, 100% of the confinements in the cities and 90% in the country were under medical supervision. Sixty per cent of those in the cities and 41% of those in the country took place with psycho-prophylactic preparation for painless delivery.

A number of institutes of medical education and research are concerned with working out health and sanitation standards and with solving specific problems of school hygiene, adolescence, women's occupational diseases in industry and rural areas, and with tracking down infantile diseases in the family, school, etc.

Mortality among women in maternity clinics fell from .88% in 1913 to .06% in 1956. Medical aid to children is the responsibility of the pediatrician of the sector. He follows his patients uninterruptedly from birth to the age of 14 through a uniform system of mobile consultations (at the polyclinic), hospital visits and home calls. Pediatric consultation, linked directly to the hospital system, is an essential part of the therapeutico-prophylactic service to children. To its role of tracking down and treating, is added regular mobile inspection of all the children of the sector, continuous observation of the living conditions of the child by calls at the homes of sick persons, education of mothers, and liaison by the pediatrician with the medical personnel of his sector who work in the school, in the day nursery, in vacation camps, etc.

VI. The Medical Cadres -- their Training and Improvement

In 1913 there were 21,900 physicians in Russia, or one for each 6,900 inhabitants. In 1928, the number had grown to 62,200. In 1930 the faculties of medicine were reorganized in the medical and research institutes and were granted an autonomous status, independent of that of the universities, and placed under the direction of the national commissariats of Public Health.

The first decree instituting uniform training for medical cadres appeared 1934. The length of the instruction period was extended from three to five years of compulsory schooling; the courses were revised and the importance of specialized disciplines emphasized.

In 1956 the 77 institutes of medical education in the Soviet Union prepared 152,767 future doctors and each year admitted 27,000 to 28,000

students. Each institute is divided into five faculties; therapeutics, pediatrics, hygiene and sanitation, stomatology, and pharmacy, to which is added a chair of specialization and improvement for graduate doctors.

The school year lasts 36 weeks. The proportion of hours of courses to hours of practical exercises is one to two. Dialectic materialism, social hygiene, labor hygiene, pedagogical hygiene, infectious diseases, physical and colloidal chemistry, military sciences, foreign languages, and general biology (replacing zoology and botany) are required subjects.

A sixth year is provided for a practical program of improvement for graduate doctors. The therapeutic physician intensifies his basic clinical disciplines (surgery, therapeutics, child-birth...); the doctor of health and sanitation perfects himself in the study of food and labor hygiene; the pediatrician studies the principles of child and adolescent hygiene, etc. During the sixth year the doctor completes the theoretical courses by actual work in one of the therapeutico-prophylactic institutions of the sector, under the direction of his teachers at the medical institute.

A Central Institute for the improvement of doctors, founded in Moscow in 1930, has regrouped the different chairs of specialized instruction scattered among the various medical institutes for research and education. This institute has become a center for training qualified specialists and directors of health and sanitation.

In 1956 the number of doctors was 14 times greater than in 1913, or 288,200 practicing physicians. The emphasis has been on specialization for medical service in rural regions. Seventy five per cent of the rural regional centers have more than five doctors, and 19% have more than ten doctors. From 1950 to 1956 the total number of rural physicians increased 4.9%, the number of ophthalmologists 87%, the number of obstetricians and gynecologists 17.1%; the number of radiologists more than doubled.

In order to raise the general level of directors of health and sanitation sectors and to relieve the administrative machinery, the conduct of public health in each sector is now being placed more and more frequently in the hands of the head physician of the regional or urban hospital.

Most of the medical institutes establish cycles of specialized improvement programs for different groups of health and sanitation organizations. These are for officials of the Ministries of Public Health of the federated and autonomous republics who are responsible for the regional and urban health sectors, and for head physicians of hospitals and epidemiological health stations.

The improvement program for medical cadres is presently being conducted along the following lines:

1) Specialization and improvement program in the medical institutes, according to the various specialty branches.

2) Improvement program for doctors already possessing considerable practical experience in their specialty (especially professors in research institutes). This is accomplished through short courses of

instruction, confined to one subject and organized by institutes for improvement programs.

3) On-the-spot specialization for regional physicians in specialized clinics and hospitals attached to the medical institute of the region. This involves temporary suspension of their normal duties.

4) Training of physicians through clinical internship.

5) Correspondence courses.

6) Study missions.

As for the training of medical assistants and nursing personnel, reforms have been implemented in several stages, from the abolition of all private and charitable instruction to the establishment of medical polytechnical centers. These are divided into three sections: training of midwives, training of nurses attached to organizations for the protection of mothers and infants, and training of nurse assistants. The work of the polytechnic centers is divided into 13 specialized branches, such as training of assistants to the physician in charge of health and sanitation, assistants in special treatment and neuro-psychiatric institutions, assistants to radiologists and laboratory technicians. The training period is usually three years; practical experience begins with the second semester.

Schools for medical personnel in day nurseries have been reorganized into schools for medical personnel of the pediatric hospital services, for day nurseries, for pediatric consultations and maternity services. This general reorganized training brings to auxiliary medical personnel the necessary qualifications to attend the sick as well as the healthy child.

The studies are completed by examinations on internal ailments, surgery, infantile diseases, gynecology and obstetrics.

In 1957 there were an average of 2.4 assistants per doctor in urban areas and 8.3 assistants in rural regions. This difference is explained by the existence of 68,300 maternity centers or informaries and 10,211 maternity hospitals in the kolkhozes in rural regions. In these centers all the work is performed by medical assistants.

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